

1 WHAT IS CLAIMED IS:

2 1. A diploid animal cell containing an engineered mutation in at least one allele of the gene  
3 encoding the  $\epsilon$  isozyme of protein kinase C (PKC $\epsilon$ ).

4 2. The cell of Claim 1, wherein said cell is a mouse cell.

5 3. The cell of Claim 2, wherein, due to said engineered mutation, the cell's levels of PKC $\epsilon$   
6 activity are less than the levels of PKC $\epsilon$  activity in *wild-type* cells.

7 4. The cell of Claim 3, wherein said mutation is a deletion mutation.

8 5. The cell of Claim 1, wherein the cell is homozygous for the mutation.

9 6. A non-human transgenic animal comprising the cell of Claim 1.

10 7. An animal that is a descendent of the non-human transgenic animal of Claim 6 and  
11 comprises said engineered mutation.

12 8. The animal of Claim 7, wherein, due to said engineered mutation, the animal's levels of  
13 PKC $\epsilon$  activity are less than the levels of PKC $\epsilon$  activity in *wild-type* animals.

14 9. The animal of Claim 8, wherein the cells of said animal are homozygous for said  
15 engineered mutation.

16 10. A method of identifying a compound that modulates anxiety, said method comprising:  
17 selecting, as a test compound, a compound that modulates the activity of PKC $\epsilon$ , and  
18 administering said test compound to a subject to determine whether the symptoms of  
19 anxiety are modulated.

20 11. A method of modulating consumption of a drug of abuse, said method comprising:  
21 administering an effective amount of a modulator of PKCs.

22 12. The method of claim 11, wherein said drug of abuse is selected from the group consisting  
23 of: alcohol, psychostimulants, opiates and sedative-hypnotic drugs.



1 relating said activity or concentration of PKCε to said standard value, wherein a  
2 statistically different activity or concentration is predictive of the degree of likelihood of said  
3 person becoming dependent upon or an abuser of said drug of abuse.

4 23. A composition comprising an inhibitor of PKCε and an agonist of a GABA<sub>A</sub> receptor.

5 24. The composition of claim 23, wherein said agonist is an allosteric agonist.

6 25. The composition of claim 24, wherein said allosteric agonist is a benzodiazepine.

7 26. The composition of claim 25, wherein said benzodiazepine is selected from the group  
8 consisting of: alprazolam, chlordiazepoxide, chlordiazepoxide hydrochloride, chlormezanone,  
9 clobazam, clonazepam, clorazepate dipotassium, diazepam, droperidol, estazolam, fentanyl  
10 citrate, flurazepam hydrochloride, halazepam, lorazepam, midazolam hydrochloride, oxazepam,  
11 prazepam, quazepam, temazepam, and traizolam.

12 27. The composition of claim 24, wherein said allosteric agonist is a barbituate.

13 28. The composition of claim 27, wherein said barbituate is selected from the group  
14 consisting of: amobarbital, amobarbital sodium, aprobarbital, butabarbital sodium, hexobarbital  
15 sodium, mephobarbital, metharbital, methohexital sodium, pentobarbital, pentobarbital sodium,  
16 phenobarbital, phenobarbital sodium, secobarbital, secobarbital sodium, talbutal, thiamylal  
17 sodium, and thiopental sodium.

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